3. Turn off the water supply valve.

1. Make sure that the water supply valve is fully open.

   e. Put the Air Inducer Cap back on, and tighten finger-tight only.

   d. Insert the Duck-bill Valve into the Air Inducer Housing.

   If the Air Inducer is working properly, the water will be drawn in.

5. Do not put anti-freeze or any other chemical agents in the china holding tank or in the

• A small amount of water may be present in the bottom of the china-holding tank. The

• When replacing components on the

Points to Remember ___________________________________________________

5. FLUSHMATE® Tank

4. Flush Valve Cartridge Assembly

3. Remove, examine, and reinstall the Flush-Valve Cartridge (4).

2. Check the actuator adjustment. The Flushrod or pushbutton should not interfere with

   • USE OF PETROLEUM-BASED LUBRICANTS OR CORROSIVE CLEANING PRODUCTS CONTAINING

   • FLUSHMATE® Tank (C-100500) is showing above the

   1. Lower Supply Group w/Hose

   a. Turn off the water supply valve.

   c. Examine the exposed O-rings on the Flush-Valve Cartridge for obstruction or

   d. Examine the inlet-screen and remove anything that may be blocking the flow of

   e. Reattach water supply line and fully open water supply valve.

   If you would like additional information or require technical assistance, please contact

Winterizing ____________________________________________________________
5. Disconnect the water supply line from the supply-shank (A).

4. Flush the toilet to relieve the pressure.

6. Examine the Air Inducer (2-D) for obstruction or damage.

2. Check for proper installation/adjustment of the Flush-Valve Cartridge. (See inlet-screen, or insufficient air-draw may cause a weak, sluggish, or no flush condition. Inadequate water pressure, an improperly adjusted Flush-Valve Cartridge, a clogged Cartridge Housing area.

b. Remove the Air inducer Cap (2-D)

d. Insert the Duck-bill Valve into the Air Inducer Housing.

If the Air Inducer is working properly, the water will be drawn in.

Owner’s Service Manual

Winterizing __________________________________________________________

1. Turn off the water supply valve and flush the toilet.

4. Follow the fixture manufacturer’s instructions for winterizing the bowl.

b. Remove the Air inducer Cap (2-D)

d. Insert the Duck-bill Valve into the Air Inducer Housing.

If the Air Inducer is working properly, the water will be drawn in.

List of Components for 501-B Series:

1. Lower Supply Group w/Hose BL100504
   (A) Supply Shank
   (B) Pressure Regulator w/Back Check
   (C) Relief Valve

2. Upper Supply Group BU100505
   (D) Air Inducer
   (E) Vacuum Breaker

3. Name Plate w/Serial Number

4. Flush Valve Cartridge Assembly C-100500
   (F) Actuator w/setscrew

5. FLUSHMATE® Tank

6. Discharge Extension w/Drain

List of Components for 503 Series:

1. Lower Supply Group w/Hose BL100504-3
   (A) Supply Shank
   (B) Pressure Regulator w/Back Check
   (C) Relief Valve

2. Upper Supply Group BU100505
   (D) Air Inducer
   (E) Vacuum Breaker

3. Name Plate w/Serial Number

4. Flush Valve Cartridge Assembly C-100500
   (F) Actuator w/setscrew

5. FLUSHMATE® Tank

6. Discharge Extension w/Drain

The Sloan FLUSHMATE® Flushometer - Tank System provides the highest performance capability available today in the ULF (Ultra-Low Fixture) category. That means the system consumes less than 1.6 gallons (6 liters) of water per flush. This remarkable performance is achieved by using compressed air inside the tank, which creates a turbo-charged flushing action for effective bowl cleaning. Compared to other types of low consumption water closets, FLUSHMATE® offers many distinct advantages.

Outstanding FLUSHMATE® Features:

- Positive Bowl Extraction (No Double Flushing)
- Stronger Flushing Action Improves Drainline Carry & Leaves Bowl Cleaner
- Large Water Spot for Reduced Housekeeping
- Uses less than 1.6 gallons per flush
- Larger Trapway to Eliminate Stoppages
- Non-Sweating Tank Enclosure
TROUBLESHOOTING

Condition: Water runs and will not shut off

A run-on condition may be caused by insufficient water pressure, an improperly adjusted Flush-Valve Cartridge, or a clogged inlet-screen. The recommended static pressure range is between 20 PSI and 125 PSI (See “Points to Remember” for a simple method to determine whether your water pressure is adequate). If sufficient water pressure has been verified and the toilet continues to run-on, the following steps may be required:

1. Make sure the water supply valve is fully open.

2. Check the actuator adjustment. The Flushrod or pushbutton should not interfere with the actuator. The proper clearance should be approximately 1/16” when the pushbutton or flush-handle is stationary. On push-button type fixtures, loosen the set-screw on the actuator (see 4-F on the component list) and rotate the actuator up (counter-clockwise) or down (clockwise) until the proper clearance is obtained. For flush-handle fixtures, observe the clearance. (See Figure 1) If necessary, adjust the actuator to allow for proper clearance. When proper clearance is obtained, tighten the set-screw.

3. Remove, examine, and reinstall the Flush-Valve Cartridge (4).
   a. Turn off the water supply valve and flush the toilet to relieve the pressure.
   b. Remove the Flush-Valve Cartridge using the handles of a pair of pliers. (See Figure 2). Turn the Flush-Valve Cartridge counter-clockwise until you can lift it out of the FLUSHMATE® tank. On 501-B Series or older flush-handle fixtures, you will need to remove the Flushrod first and disconnect the handle-linkage. Loosen the front-side retainer clip and slide the Flushrod out from under it. Lift the Flushrod and pull it toward you. NOTE: Use caution to prevent the retainer clips or screws from falling into the china holding tank; they may be difficult to retrieve. On 503 Series flush-handle fixtures, disengage the Flushrod from the handle-linkage and flip it away from the Flush-Valve Cartridge. It is not necessary to loosen the retainer clips. (See Figure 3).
   c. Examine the exposed O-rings on the Flush-Valve Cartridge for obstruction or damage. If the O-rings are damaged, the Flush-Valve Cartridge should be replaced. (See Figure 4).
   d. Insert the Flush-Valve Cartridge into the FLUSHMATE® tank and thread it clockwise into place until one (1) black thread (on the FLUSHMATE® tank) is showing above the Flush-Valve Cartridge. (See Figure 5) Fully open the water supply valve and continue to thread the Flush-Valve Cartridge clockwise, 1/4 turn at a time, pausing briefly between each 1/4 turn, until the water stops running into the toilet bowl and the FLUSHMATE® tank pressurizes.
   e. Reinstall Flushrod and handle-linkage.

4. Check Inlet Screen
   a. Turn off the water supply valve.
   b. Flush the toilet to relieve the pressure.
   c. Disconnect the water supply line from the supply-shank (A). (See Figure 6)
d. Examine the inlet-screen and remove anything that may be blocking the flow of water into the FLUSHMATE® tank. The inlet-screen can be removed by inserting a small pointed object (such as a large paperclip or the blade of a pen-knife) into the lower-supply shank and working the inlet-screen loose. (See Figures 7a, 7b, 7c) The inlet-screen easily snaps back into position by pushing it upward into the supply-shank with your fingertip. (See Figure 7d)

e. Reattach water supply line and fully open water supply valve.

Condition: Weak, incomplete, sluggish, or no flush

Inadequate water pressure, an improperly adjusted Flush-Valve Cartridge, a clogged inlet-screen, or insufficient air-draw may cause a weak, sluggish, or no flush condition.

1. Make sure that the water supply valve is fully open.

2. Check for proper installation/adjustment of the Flush-Valve Cartridge. (see Step 3, “Water Runs and Will Not Shut Off”)

3. Turn off the water supply valve.

4. Flush the toilet to relieve the pressure.

5. Disconnect the water supply line from the supply-shank (A). (See Figure 6)
   a. Examine the inlet-screen and remove anything that may be blocking the flow of water into the FLUSHMATE® tank. The inlet-screen can be removed by inserting a pointed object (such as a large paperclip or the blade of a pen-knife) into the lower-supply shank and working the inlet-screen loose. (See Figures 7a, 7b, 7c) The inlet-screen easily snaps back into position by pushing it upward into the supply-shank with your fingertip. (See Figure 7d)

6. Examine the Air Inducer (2-D) for obstruction or damage. (See Figure 8)
   a. Make sure the water supply valve is turned off and the toilet has been flushed to relieve the pressure.
   b. Remove the Air inducer Cap (2-D) (See Figure 9)
   c. Remove the Duck-bill Valve from the Air Inducer Cap. (See Figure 10) The flat "lips" of Duck-bill Valve should open fully when the square sides are squeezed together. (See Figure 11) Rinse any obstruction or mineral deposits from the Duck-bill Valve. If the Duck-bill Valve is damaged, it must be replaced.
   d. Insert the Duck-bill Valve into the Air Inducer Housing. (See Figure 12)
   e. Put the Air Inducer Cap back on, and tighten finger-tight only. (See Figure 13)
   f. Reconnect the water supply line and fully open water supply valve.

7. Check Air Inducer for sufficient air-draw. Place a small amount of water (two to three drops) over the hole on top of the Air Inducer Cap (See Figure 14) and flush the toilet. If the Air Inducer is working properly, the water will be drawn in. (See Figure 15)

8. Check the Flush-Valve Cartridge for leaks. Pour a small amount of water into the Cartridge Housing area. (See Figure 16) If bubbles are coming from the center or the edge of the Flush-Valve Cartridge, it should be replaced.
**Condition: Vacuum Breaker Leaking**

If the Vacuum Breaker (2-E) is leaking, it is likely that the water pressure is insufficient or that there is insufficient flow due to a plugged inlet-screen in the Lower Supply Shank. The recommended static pressure range is between 20 PSI and 125 PSI.

**Note:**
If the trouble-shooting steps listed in this manual do not resolve your problem, contact FLUSHMATE® Consumer Services at 800-533-3460 or email info@flushmate.com. Please be prepared to provide the serial number and date of installation of your FLUSHMATE® system.

**Winterizing**

1. Turn off the water supply valve and flush the toilet to relieve the pressure.
2. Place a bucket under the Lower Supply Shank (1-A) and disconnect the water supply line, allowing the water to drain into the bucket.
3. Push down on the Actuator and pull it up momentarily to allow air into the vessel.
4. Follow the fixture manufacturer’s instructions for winterizing the bowl.
5. Do not put anti-freeze or any other chemical agents in the china holding tank or in the FLUSHMATE® Tank.

**Points to Remember**

- When replacing components on the FLUSHMATE® Flushometer-Tank System, make certain that the water supply valve is turned off and the toilet has been flushed to relieve pressure in the FLUSHMATE® tank.
- **USE OF PETROLEUM-BASED LUBRICANTS OR CORROSIVE CLEANING PRODUCTS CONTAINING CHLORINE, SUCH AS HOUSEHOLD BLEACH, DROP-IN BLOCKS OR TABLETS, OR DISINFECTANTS THAT ARE APPLIED INSIDE THE CHINA HOLDING TANK WILL VOID YOUR FLUSHMATE® WARRANTY.**
- FLUSHMATE® Flushometer-Tank Systems are designed to be used with cold water.
- The Flush-Valve Cartridge can be removed by inserting the handles of a pair of pliers into the top of the Flush-Valve Cartridge and turning counter-clockwise.
- A small amount of water may be present in the bottom of the china-holding tank. The potential for odor can be eliminated by adding a cup of white vinegar to the china holding-tank. The white vinegar will act as natural disinfectant.
- Your water pressure is adequate if your water supply line will yield one or more gallons of water within thirty (30) seconds.
- Replacement parts are readily available by contacting Consumer Services at 800-533-3460 or by visiting the “Where to Buy” section of our website, www.flushmate.com.

If you would like additional information or require technical assistance, please contact FLUSHMATE® Consumer Services at 800-533-3460, or visit our website, www.flushmate.com. For faster service, please be prepared to provide the serial number and date of installation of your FLUSHMATE® system.
1. Make sure that the water supply valve is fully open.

Inadequate water pressure, an improperly adjusted Flush-Valve Cartridge, a clogged
Condition: Weak, incomplete, sluggish, or no flush

The inlet-screen easily snaps back into position by pushing it upward into the
supply-shank with your fingertip.

If bubbles are coming from the center or
(See Figure 7d)

If the trouble-shooting steps listed in this manual do not resolve your problem, contact
Consumer Services at 800-533-3460 or visit our website,

• When replacing components on the FLUSHMATE® Flushometer-Tank System, make certain that the water
supply valve is turned off and the toilet has been flushed to relieve pressure in the FLUSHMATE® tank.

• USE OF PETROLEUM-BASED LUBRICANTS OR CORROSIVE CLEANING

THAT ARE APPLIED INSIDE THE CHINA HOLDING TANK WILL VOID YOUR FLUSHMATE® WARRANTY.

• A small amount of water may be present in the bottom of the china-holding tank. The

• The Flush-Valve Cartridge can be removed by inserting the handles of a pair of pliers

4. Check Inlet Screen

3. Push down on the Actuator and pull it up momentarily to allow air into the vessel.

2. Turn off the water supply valve and flush the toilet to relieve the pressure.

FLUSHMATE® FLUSHOMETER - TANK

501-B and 503 Series

800-533-3460 248-446-5300
www.flushmate.com

Installation Date ____________________________________________________________

Serial Number ____________________________________________________________